



Risk Mitigation Consulting Inc.

Intelligence and Analysis Division

OPEN SOURCE UPDATE

January 2021

INTENT

This open source periodical is designed to provide an overview of relevant, publicly available information on threat and hazard events and analysis of potential impacts to the interests of the United States, both at home and abroad. This product is not intended to be a comprehensive overview of all threat and hazard news and inclusion in this product does not constitute a confirmation of credibility nor precedence by RMC.



Threats	Page
Christmas Day Bomber in Nashville May Have Been Inspired by Conspiracy Theories <i>Terrorism</i>	2
White Supremacists Planned to Target Power Stations <i>Terrorism</i>	3
SolarWinds Hack Demonstrates Supply Chain Vulnerabilities <i>Cyber</i>	4
Homicide Rates Spike in Cities Across the U.S. Amidst COVID-19 Pandemic <i>Violent Crime</i>	6
DOJ Files Suit Against Walmart for Role in Opioid Crisis <i>Narcotics</i>	6
Leaders of MS-13 Gang Charged With Terrorism by U.S. Authorities <i>Gang Activity</i>	8
Man Arrested After Drone Collides with Police Helicopter in Los Angeles <i>Unmanned Aerial Systems (UAS)</i>	9

Hazards	Page
Average Temperatures for 2020 Mark Record High <i>Meteorological Hazards</i>	11
Camp Pendleton Wildfire Evacuated 7,000 Residents on Christmas Eve <i>Meteorological Hazards</i>	12
COVID-19 Could Be Around “Forever” as Endemic Disease <i>Biological Hazards</i>	13

On the Radar	15
---------------------	----



Threats

Christmas Day Bomber in Nashville May Have Been Inspired by Conspiracy Theories – *Terrorism*

Summary: On the morning of 25 December 2020, Christmas Day, a recreational vehicle parked on Second Avenue North in Nashville exploded. The vehicle had stopped there outside of an AT&T switch facility at approximately 1:30 a.m. The explosion followed a series of ominous warning signs. At approximately 4:30 and 5:30 a.m., two bursts of gunfire rang out, leading a resident to call 911. Minutes later, a speaker on the RV broadcasted a series of warnings to evacuate, alternating with the Petula Clark song “Downtown.” The message continued until 6:30 a.m., when the vehicle exploded. The blast nearly destroyed a city block, injuring at least three (3) and destroying 40 buildings. The vehicle was traced to Anthony Quinn Warner, 63, an IT worker who had had little contact with law enforcement, aside from a minor drug charge in 1978. In August 2019, Warner’s then-girlfriend warned law enforcement of his interest in bomb making. After a period of observation, authorities could find no evidence of a crime. Prior to the attack, Warner deeded two properties to a different woman and insinuated to a neighbor that he would be famous after Christmas. Warner is believed to have died in the explosion.

Warner’s motives remain elusive, but he mailed writings that detailed his viewpoints and justifications to several acquaintances. The contents of the mailings are being reviewed by the FBI, but open source reporting suggests that Warner sent a packet of nine (9) typed pages and two (2) USB sticks. The pages included conspiratorial writings about aliens and UFOs, the moon landing, and the terrorist attacks of September 11, 2001. Warner also may have subscribed to a bizarre, but well-documented, conspiracy theory that suggests that reptilian extraterrestrials have controlled world affairs for thousands of years, and that they are allied with certain elected officials and world leaders. As Warner’s motives are further scrutinized by law enforcement, the residents and business owners affected by the blast have begun to collect their belongings from the wreckage. Nashville law enforcement has also begun to consider redundancies in its communications architecture, after the explosion affected phone and internet service.

Analyst Comment: The FBI has yet to label Warner’s actions as terrorism. He seemed to, as of this time, been driven by his belief in a series of conspiracy theories. However, Warner’s reported belief in anti-5G conspiracy theories could explain his targeting of the AT&T facility.

While comical on its face, the “lizard people” theory had, as of a 2013 survey, approximately 12 million adherents. Believers in the theory have not committed a rash of violent crimes. However, the 6 January attack on the United States Capitol was at least partially inspired by the “Qanon” conspiracy theory, which bears similarities. This demonstrates that fringe conspiracy theories can sometimes encourage violence among believers. Adherents of Qanon have committed a series of crimes, including threats against elected officials, the California wildfires of August 2018, the murder of a prominent Mafioso, the “Pizzagate” incident, and several plots disrupted by law enforcement. The origins of the conspiracy are well-documented, dating to an anonymous internet forum post in 2017, with several allegedly from the same source “dropping” up until the days following the 2020 Presidential Election. Qanon believers assert that President Donald Trump is



engaged in a war “behind the scenes” against a cabal of Democratic officials and celebrities that operate a worldwide child trafficking ring. With both the lizard people conspiracy and Qanon, believers think that an evil cabal of elites is responsible for much of the world’s misfortune.

The internet has allowed the adherents of fringe conspiracy theories to recruit new followers with websites and videos that appear professional and legitimate. Some users are unable to distinguish between mainstream media outlets and sites that assert fringe beliefs. While it is unclear how or when Anthony Quinn Warner adopted some of these beliefs, there is no shortage of sources online. Many Americans have found themselves deeply enmeshed in these ideas, and there are numerous online communities willing to support and reinforce their participation. As COVID-19 lockdowns continue around the country, people will continue to spend a significant amount of time online and on social media, both for work and leisure. This multiplies the opportunities for potential exposure to these groups and ideas. While websites and videos espousing these beliefs are protected by the First Amendment, the attack on the U.S. Capitol should alert elected officials and law enforcement that conspiracy theories can sometimes fuel devastating acts of violence.

Sources: <https://www.tennessean.com/in-depth/news/local/2021/01/10/timeline-christmas-morning-bombing-nashville/6578915002/>

<https://www.tennessean.com/story/news/local/2021/01/11/nashville-bombing-update-week-3/6578422002/>

<https://www.cnn.com/2020/12/29/us/anthony-quinn-warner-nashville/index.html>

<https://www.insider.com/nashville-bombing-suspect-sent-packages-conspiracy-theories-across-country-fbi-2021-1>

<https://www.insider.com/lizard-people-conspiracy-theory-origin-nashville-bomber-qanon-2021-1>

<https://www.tennessean.com/story/news/local/2021/01/11/nashville-bombing-update-week-3/6578422002/>

<https://www.nbcnews.com/tech/tech-news/how-three-conspiracy-theorists-took-q-sparked-qanon-n900531>

<https://www.theguardian.com/us-news/2020/oct/15/qanon-violence-crimes-timeline>

White Supremacists Planned to Target Power Stations – Domestic Terrorism

Summary: In December 2020, an affidavit was mistakenly unsealed, revealing the FBI was alleging white supremacists had plotted to attack power stations in the south-eastern US. The plan involved shooting rifle rounds into power stations to trigger power outages. It was intended to serve as a wake-up call to the public to make them aware of the “harsh reality of life.” Additionally,



one member of the plan wanted the group to be “operational” on a fast-tracked timeline if Donald Trump were to lose his re-election bid.

Analyst Comment: Energy is one of 16 critical infrastructure sectors identified by the US government. Critical infrastructure sectors are considered vital and their incapacitation or destruction would have a debilitating effect on security, national economic security, national public health, and/or safety. Critical infrastructure is an appealing target to transnational and domestic terrorists due to the potentially serious and wide-ranging consequences of a successful attack. Additionally, the energy sector in the US has a variety of vulnerabilities including the relatively accessible power stations that were allegedly targeted in this plot. The US energy and power grid has been targeted in the past by both cyber and physical attacks.

This plot comes amid a pattern of white supremacist domestic terrorist attacks in the US. In October 2020 DHS released a report that identified domestic violent extremism as a threat to the US. The report found white supremacist groups have been responsible for more deaths than any other domestic extremist group. Additionally, the political comments relating to the attack timeline are of note in light of a Joint Intelligence Bulletin released on 13 January 2021. In the report US intelligence agencies warn that violent extremists with "political grievances" are likely to pose the "greatest domestic terrorism threats in 2021."

Sources: <https://www.theguardian.com/world/2020/dec/23/white-supremacists-plotted-attacks-us-power-plants-fbi-alleges>

https://www.msn.com/en-us/news/politics/fueled-by-the-us-capitol-siege-violent-extremists-with-political-grievances-will-likely-pose-the-greatest-domestic-terrorism-threats-in-2021-intelligence-report-says/ar-BB1cJKFB?fbclid=IwAR3COEWdfSvos40Bn7SzJGt37Re65Mej7wv_e7LI_YL03NSKoMz4Z8jsfOU&ocid=uxbndlbing

<https://www.msn.com/en-us/news/politics/domestic-terrorism-represents-growing-threat-to-united-states/ar-BB1cBHU0>

SolarWinds Hack Demonstrates Supply Chain Vulnerabilities – *Cyber*

Summary: State-sponsored Russian hackers are accused of an attack resulting in a massive data breach that has affected the Commerce and Treasury Departments, along with cybersecurity firm FireEye, several corporations, and other national governments. FireEye announced that it had been hacked and that some of its own penetration tools had been stolen. FireEye also called the breach a global campaign. These tools were used to infect a widely-used server program called SolarWinds. SolarWinds was first accessed by hackers on 4 September 2019. The Advanced Persistent Threat (APT) called “SUNBURST” was compiled and deployed on 20 February 2020. In the case of an APT, hackers gain access and remain hidden for an extended period of time to gather information. On 26 March, SolarWinds deployed a routine update that distributed SUNBURST to as many as 18,000 users. On 13 December 2020, the Cybersecurity and Infrastructure Security Agency (CISA), part of the Department of Homeland Security, issued



emergency directive 21-01 for all federal agencies using SolarWinds to power down and disconnect from the network. By 31 December, CISA ordered all federal agencies to upgrade SolarWinds to version 2020.2.1HF2, which eliminated the malicious code. By 11 January 2021, U.S. intelligence agencies had formerly accused Russian hackers in the attack, and cybersecurity firm Kaspersky confirmed that the intrusion resembled the malware “Kazuar” from a hacking group known as Turla, which likely operates on behalf of the Federal Security Service of the Russian Federation (FSB). The hackers may have been attempting to copy COVID-19 vaccine research, but the investigation of data accessed and/or stolen is ongoing.

Analyst Comment: SolarWinds Corp. is in the unenviable position of demonstrating vulnerabilities in the “cyber supply chain.” Just as with the 2018 scandal surrounding Elemental servers used in DoD data centers, CIA drones, and Navy warships, the SolarWinds hack has shown that despite their best efforts and best practices, governments and private companies may sometimes fall victim to attacks on their third-party contractors. With the Elemental servers, their San Jose-based manufacturer, SuperMicro, used a microchip manufactured in China, which allowed state-sponsored hackers to access systems using the servers. In the case of SolarWinds, the APT “SUNBURST” was placed by Russian hackers and unwittingly distributed through a routine patch. The results were catastrophic, and the type and amount of data stolen are still being tabulated. Besides assessing the damage, businesses and government must now assess their contracting and vetting processes and improve security protocols, all while pausing work-in-progress. This demonstrates an abiding risk that must be considered by both government agencies and private businesses – hackers can reach their targets through their supply chain. Virtually all companies depend on third party hardware and software to support their end product. Malicious actors don’t have to target the Department of Homeland Security’s servers directly. Rather, with knowledge obtained from publicly available contracts, they only have to target its vendors.

Sources: <https://apnews.com/article/us-agencies-hacked-global-cyberspying-e8a2e819f7cc6982f6a72f8c85209b72>

<https://www.channele2e.com/technology/security/solarwinds-orion-breach-hacking-incident-timeline-and-updated-details/>

<https://www.wsj.com/articles/solarwinds-hack-forces-reckoning-with-supply-chain-security-11610620200>

<https://www.cisa.gov/news/2021/01/05/joint-statement-federal-bureau-investigation-fbi-cybersecurity-and-infrastructure>

https://usa.kaspersky.com/about/press-releases/2020_na-kaspersky-experts-connect-solar-winds-attack-with-kazuar-backdoor

<https://taskandpurpose.com/bulletpoints/china-hacking-microchips-dod-cia/>



Homicide Rates Spike in Cities Across the U.S. Amidst COVID-19 Pandemic – *Violent Crime*

Summary: Amidst the COVID-19 pandemic and widespread lockdowns, homicide rates spiked across the United States during 2020 in 28 cities profiled. A November 2020 report by the National Commission on COVID-19 and Criminal Justice found that there was a 29% increase in homicides between January-October 2020 compared to the same timeframe from one year prior. Within the study, the largest city examined was Los Angeles, while the smallest was St. Petersburg. Though homicides increased significantly, a number of property crimes decreased during the time period examined.

Analyst Comment: While this report is not a representative sample of the U.S. (which includes many rural areas), the study highlights the unique crime dynamics present in major cities. The decrease in property crimes could potentially be attributed to stay-at-home orders which kept people in their homes, making them less vulnerable to burglaries. The closure of some stores has also been suggested as a reason for decreased larcenies (which include acts of shoplifting). Still, the rise in homicides remains a serious concern.

Some observers state than an increased sense of economic desperation driven by the pandemic has contributed to the rise in homicides, or have suggested that mental health issues have been exacerbated by the lockdowns. However, other observers have attributed the rise in homicides to police departments' challenges conducting traditional patrol and community policing efforts during the time of COVID-19, along with similar challenges regarding violence prevention programs. It is likely that some combination of the aforementioned factors are driving the current rise in homicide in America's cities, though the current research cannot make an authoritative causal attribution.

Sources: <https://covid19.counciloncj.org/2020/11/30/impact-report-covid-19-and-crime-2/>

<https://www.cnn.com/2021/01/01/us/homicides-2020-increase-coronavirus/index.html>

<https://www.npr.org/2021/01/06/953254623/massive-1-year-rise-in-homicide-rates-collided-with-the-pandemic-in-2020>

DOJ Files Suit Against Walmart for Role in Opioid Crisis – *Narcotics*

Summary: On 22 December 2020, the Department of Justice filed a civil suit against Walmart, Inc. for its alleged role in the ongoing opioid crisis. The DOJ alleges that the company's pharmacies across the country knowingly and willingly filled prescriptions for opioid painkillers despite certain "red flags" from customers and prescribing doctors. Pharmacists are required to look for certain warning signs when dispensing opioids. According to 21 C.F.R. § 1301.74(b), pharmacies are required to inform the DEA of "orders of unusual size, orders deviating substantially from a normal pattern, and orders of unusual frequency." The complaint also identifies other warning signs, including prescriptions from out of town, repetitive prescriptions,



and unusual or alarming patient behavior. The complaint also alleges that Walmart pharmacists filled prescriptions for benzodiazepines, stimulants, and sedatives that drug abusers often combine with opioids in a “cocktail.” In an internal memo obtained by the DOJ, the director of Walmart’s compliance unit asserted that “[d]riving sales and patient awareness” were better uses of the company’s time than analyzing reports from pharmacists.

Analyst Comment: Walmart has been aware of a growing sentiment regarding its role in the national opioid crisis, as it has been the subject of other civil suits by state and local governments. In October, it filed a preemptive countersuit against the DOJ, alleging that the department wanted to embarrass the corporation in order to extract a financial settlement. It asserts that the DEA has failed to police the doctors writing unwarranted or illegal prescriptions, while maintaining that it has always “empowered” its pharmacists to report invalid prescriptions. If the DOJ’s lawsuit is successful, the company could face billions of dollars in fines. This lawsuit arrives during a transitory period for the retailer, as it attempts to rebrand itself as socially conscious, trying to respond to parallel controversies over gun sales, employee wages, and its environmental impact.

The results of the DOJ’s civil suit against Walmart remain to be seen. However, the CDC suggests that opioid overdose deaths have accelerated under lockdowns in response to COVID-19. There were 81,000 opioid-related deaths in the 12 months ending in May 2020, which is an increase from the prior 12-month period ending in June 2019. Walmart has, as of June 2020, 4,674 retail locations in the United States. The vast majority have pharmacies, which means the company bears proportionate responsibility for accepting, or failing to deny, invalid prescriptions. This leaves individual pharmacists to make appropriate judgement calls. All 50 states already have “doctor shopping” laws and the “red flags” are clearly enumerated in the law. However, this scrutiny is usually unwelcome by patients, many of whom may claim mitigating circumstances or feel that their prescription is legitimate. Some drug abusers and, possibly, their doctors are not cognizant of their problem. Regardless, Walmart will have its day in court and may be forced to pay substantially. It will likely not suffer bankruptcy, as Purdue Pharma did before it paid \$8 billion in penalties to the DOJ last year. However, the DOJ’s actions may force the company to reexamine its policies and best practices when confronted with questionable prescriptions.

Sources: <https://www.justice.gov/opa/press-release/file/1347906/download>

<https://www.npr.org/2020/12/23/949525020/walmart-is-latest-big-name-company-embroiled-in-opioid-crisis>

<https://www.barrons.com/articles/walmart-stock-could-benefit-as-esg-investors-add-it-to-their-funds-51610151686>

<https://www.cdc.gov/media/releases/2020/p1218-overdose-deaths-covid-19.html>

<https://www.scrapehero.com/number-of-walmart-stores-and-an-analysis-of-related-store-data/>

<https://www.cnbc.com/2019/01/15/walmart-pharmacies-likely-to-leave-cvs-network-because-of-pricing-dispute.html>



<https://www.cdc.gov/phlp/docs/menu-shoppinglaws.pdf>

Leaders of MS-13 Gang Charged with Terrorism by U.S. Authorities

– Gang Activity

Summary: 14 leaders of MS-13 (an El Salvador-based street gang/drug trafficking organization with a significant presence throughout the U.S.) were indicted for terrorism-related criminal charges by the U.S. Department of Justice. Per U.S. Immigration and Customs Enforcement (ICE), the defendants were charged with a number of crimes to include “conspiracy to provide and conceal material support to terrorists, conspiracy to commit acts of terrorism transcending national boundaries, conspiracy to finance terrorism and narco-terrorism conspiracy in connection with the defendants’ leadership of the transnational criminal organization over the past two decades from El Salvador, the United States, Mexico and elsewhere.” The 14 individuals charged comprise MS-13’s “Board of Directors” known as the Ranfla Nacional. Three of the individuals are still fugitives, while 11 are in the custody of El Salvador’s government. The U.S. is reportedly exploring options for extradition of those 11 individuals.

Analyst Comment: Though MS-13’s tactics as a gang often rely on violence and intimidation, the activities of traditional street gang/drug trafficking organizations typically do not meet the U.S. government’s criteria for terrorist activities. The U.S. government has a variety of definitions for terrorism which vary agency to agency, and occasionally conflict with crimes contained within the U.S. Code. Per the FBI, international terrorism is defined as “violent, criminal acts committed by individuals and/or groups who are inspired by, or associated with, designated foreign terrorist organizations or nations (state-sponsored).” While MS-13 has not been designated as a foreign terrorist organization by the U.S., it is recognized as a terrorist group by the government of El Salvador.

Still, while the choice to charge the Ranfla Nacional members with terrorism charges is unique, it is not entirely unprecedented. The first terrorism charges against a member of MS-13 were filed in July 2020 against an El Salvador-based leader of the gang who had directed some of the gang’s activities in the U.S.

Typically, the definition of terrorism includes a motive based on political, social, or religious factors, rather than the financial motives of gangs/drug trafficking organization. However, a former FBI gang specialist stated that prosecuting such cases under the guise of terrorism has benefits, to include “open[ing] up and afford[ing] greater intelligence and investigative tools” to include “utilization of Patriot Act type laws and regulations. Though such an approach may be controversial, it can also allow law enforcement a larger “toolbox” to disrupt and dismantle violent drug trafficking organizations such as MS-13.

Sources: <https://www.ice.gov/news/releases/ms-13s-highest-ranking-leaders-charged-terrorism-offenses-us>



<https://www.reuters.com/article/us-usa-crime-ms13/u-s-charges-14-leaders-of-ms-13-gang-with-terrorism-idUSKBN29J2KX>

<https://www.fbi.gov/investigate/terrorism>

<https://www.foxnews.com/us/first-ever-terrorism-charge-against-ms-13-mean>

<https://www.justice.gov/usao-edva/pr/ms-13-leader-el-salvador-charged-rico-and-terrorism-offenses>

Man Arrested After Drone Collides with Police Helicopter in Los Angeles – *Unmanned Aerial Systems (UAS)*

Summary: On 14 January, a Los Angeles man pled guilty to one misdemeanor count of unsafe operation of an unmanned aircraft after mistakenly crashing his drone into a Los Angeles Police Department helicopter that was responding to a burglary in progress. A spokesman for the U.S. attorney’s office in Los Angeles said the man, identified as 22-year-old Andrew Rene Hernandez, is believed to be the first person in the country to be convicted of that offense, which carries a punishment of up to one year in prison.

The incident reportedly began when Hernandez heard police sirens and a helicopter overhead, and decided to launch his DJI Model MIX Mavic Pro Platinum (a consumer hobbyist drone) out of curiosity. Per court documents, Hernandez allegedly noticed his drone strike the helicopter as it ascended from his home. An FBI affidavit stated that the pilot of the helicopter saw the drone and attempted to evade it by ascending, though the drone ultimately struck the bottom of the helicopter, forcing the pilot to conduct an emergency landing at a nearby heliport. Roughly two months after the collision, FBI agents were able to locate and arrest Hernandez based on information retrieved from the drone’s memory card.

Analyst Comment: This incident highlights the potential for consumer drones to interfere with official government operations (to include emergency responses) and marks the first conviction for unsafe operation of an unmanned aircraft in the U.S. Small drones, such as the DJI Mavic piloted by Hernandez have proliferated widely within the civilian market, and many users operate such drones in violation to established laws, rules, and regulations. Many, like Hernandez, do not actively seek to cause harm, but rather can create dangerous situations due to negligence, carelessness, recklessness, or simple ignorance of the aforementioned laws, rules, and regulations that apply to drone use.

One prominent example of drone interference in emergency responses is related to wildfire firefighting operations. The possibility of a mid-air collision occurring between a drone and a firefighting aircraft is often so high that firefighting operations must be temporarily halted. Per the National Interagency Fire Center, there have been at least 172 documented instances of drone incursions on wildfire response efforts since 2015, including 16 cases where firefighting efforts



had to be shut down. This situation can allow fires to cause more damage, death, and injury than if drone operators had obeyed orders not to fly near wildfires.

Drones can also interfere with traditional firefighting efforts (for example, a structure fire), or police operations (as in Los Angeles), as well as medical emergency/EMS operations, disaster response/search and rescue, or military operations. Drone users should familiarize themselves with (and obey) all laws, rules, and regulations regarding drone flights near emergencies, and public safety/military personnel should remain vigilant to the possibility of drones flying overhead.

Sources: <https://www.latimes.com/california/story/2021-01-14/man-admits-flying-drone-that-struck-lapd-helicopter>

<https://www.mercurynews.com/2020/11/20/hollywood-man-arrested-after-september-drone-crash-with-lapd-helicopter/>

<https://www.newsweek.com/california-man-arrested-drone-crashes-police-helicopter-1548927>

https://www.faa.gov/uas/media/FAA_drones_wildfires_toolkit.pdf

<https://www.nifc.gov/drones/outreach.html>

Hazards

Average Temperatures for 2020 Mark Record High – Meteorological

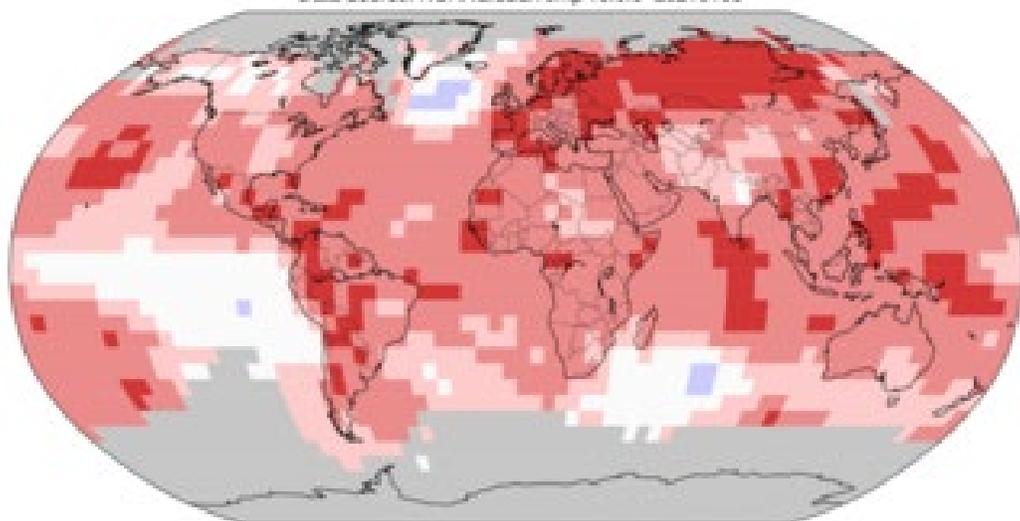
Summary: Earth’s global average surface temperature in 2020 tied with 2016 as the warmest year on record, according to an analysis by NASA. Compared to 2019, 2020 was, on average, 0.4°C warmer. Continuing the planet’s long-term warming trend, the year’s globally averaged temperature was 1.02°C (1.84°F) warmer than the baseline 1951-1980 mean, according to scientists at NASA’s Goddard Institute for Space Studies. The GISS temperature analysis is accurate to within 0.1°F with a 95% confidence level for the most recent period. The 2020 GISS values represent surface temperatures averaged over both the whole globe and the entire year. Local weather plays a role in regional temperature variations, so not every region on Earth experiences similar amounts of warming even in a record year. According to NOAA, parts of the continental United States experienced record high temperatures in 2020, while others did not.

Analyst Comment: The annual global land and ocean temperature has increased at an average rate of +0.14°F (+0.08°C) per decade since 1880; however, since 1981 the average rate of increase is more than twice that rate (+0.32°F / +0.18°C). The seven warmest years on record have occurred since 2014; the 10 warmest years have occurred since 2005. By tracking these trends, predictive models can be made to prepare for a warming climate.

Land & Ocean Temperature Percentiles Jan–Dec 2020

NOAA’s National Centers for Environmental Information

Data Source: NOAAGlobalTemp v5.0.0–20210106





In addition to climate change trends, the largest source of year-to-year variability in global temperatures typically comes from the El Niño-Southern Oscillation (ENSO). The ENSO cycle includes both El Niño and La Niña, two different points in a naturally occurring cycle of heat exchange between the ocean and the atmosphere. A La Niña has been present for the last few months of 2020, causing a slight cooling of the atmosphere. However, 2020 also began in an El Niño, causing a slight increase in the average overall temperature. 2021 has begun amidst a La Niña. This cycle is expected to have a larger influence on 2021 than 2020.

Tracking and accounting for rising temperatures is vital across the globe. Increasing heat has directly led to a loss of sea ice and ice sheet mass, sea level rise, longer and more intense heat waves, more intense tropical cyclones, more instances of heat waves and extreme heat, more frequent and larger wildfires, longer periods of drought, and regionally variant negative biological impacts. Many of these instances have been observed and written about in previous editions of the Open Source Update.

Sources: <https://www.giss.nasa.gov/research/news/20210114/>

<https://www.ncei.noaa.gov/news/global-climate-202012>

<https://www.nytimes.com/2021/01/08/climate/hottest-year-ever.html>

Camp Pendleton Wildfire Evacuates 7,000 Residents on Christmas Eve – Meteorological Hazards

Summary: On 23 December 2020, a brush fire named “the Creek Fire” began near De Luz and Sandia Creek roads on Marine Corps Base (MCB) Camp Pendleton in California. Wind and steep terrain made the fire difficult to contain, much less access. By Thursday, 24 December, mandatory evacuations were issued for homes on De Luz Road, Main Avenue, Dougherty Street, and Ceramic, Darla and Shady Lanes in Fallbrook; and, De Luz Housing and Lake O’Neill campground on Camp Pendleton. Electricity was cut for thousands of customers in the area to prevent additional fires from downed power lines or debris hitting electrical equipment. Southern California Edison cut power to more than 18,000 customers. Almost 6,800 San Diego Gas & Electric customers were blacked out. San Diego County, where the installation is located, experienced winds up to 71 mph. That evacuation order was lifted Thursday night and about 7,000 residents were allowed to return to their homes. Wildfires are not unknown to Camp Pendleton or the surrounding area. By the camp’s own measure, its firefighters extinguish approximately 101 wildland fires on base annually and 185-training related fires. In 2019, more than 6,743 acres of land burned. By the night of Sunday, 17 December, the Creek Fire was 98% contained, but it had burned 4,200 acres.

Analyst Comment: The Creek Fire concluded a devastating year of wildfires in California that included 9,917 incidents that resulted in 4,257,863 acres burned and 33 fatalities, with 10,488 structures burned. That makes 2020 the largest wildfire season in modern history. In late August 2020, the state was battling 367 simultaneous blazes. Far from the picture of a tidy, fenced in military base, many Camp Pendleton residents are adjacent to nature, and the base is no stranger



to fires. It mitigates the regular training fires with 164 miles of fire breaks, and the base is serviced by its own fire department. There is also a base-wide Fire Danger Rating assigned to current conditions. This is used not only to warn personnel and residents, but to schedule and reschedule training accordingly. Residents and personnel are instructed to mow lawns before 10:00 a.m., to avoid driving on grass or shrubs, and to extinguish outdoor fires. Camp Pendleton's response to the Creek Fire is admirable, but the blaze is part of an ongoing crisis in California that has been exacerbated by climate change and years of dry kindling that have accumulated across the state. The accumulation requires thinning and prescribed burns to remove, which the state has been slow to undertake. The net of jurisdictional responsibilities and ownership across federal, state, local, tribal, and private entities makes this process all the more complicated. Camp Pendleton and other installations in California will continue to be affected by this state of affairs, which, in turn, affects personnel, assets, and operations.

Sources: <https://www.cbsnews.com/news/southern-california-creek-fire-wildfire-burns-camp-pendleton-evacuation-orders-lifted-today-2020-12-24/>

<https://www.kpbs.org/news/2020/dec/26/brush-fire-fallbrook-camp-pendleton-creek/>

<https://www.nbcsandiego.com/news/local/north-countys-creek-fire-now-98-contained-camp-pendleton-announces/2481714/>

<https://www.nbcsandiego.com/news/local/brush-fire-breaks-out-in-remote-north-county/2479767/>

<https://www.pendleton.marines.mil/News/News-Article-Display/Article/584781/wildland-fire-preparedness-week-3-base-wide-evacuation-procedures-and-pre-evacu/>

<https://www.fire.ca.gov/incidents/2020/>

<https://www.pendleton.marines.mil/Wildland-Fire-Information-Prevention/>

<https://www.technologyreview.com/2020/09/17/1008473/wildfires-california-prescribed-burns-climate-change-forests/>

COVID-19 Could Be Around “Forever” as Endemic Disease – *Biological Hazards*

Summary: Speaking at a panel discussion, the CEO of Moderna (one of the prominent manufacturers of the COVID-19 vaccine) stated that COVID-19 would likely be around "forever" as an endemic disease, echoing concerns raised by other health experts. According to the U.S. Centers for Disease Control and Prevention (CDC), a disease is endemic when it is constantly or predictably prevalent within a population or region.



In May 2020 (just a few months into the global COVID-19 pandemic) a top World Health Organization (WHO) official stated that COVID-19 may become endemic, and “may never go away.” The official, WHO Emergencies Director Dr. Mike Ryan likened the potential for such a situation to that of HIV, which is still around decades after its initial outbreak, albeit with a number of treatment options that allow those with the disease to lead “long, healthy lives,” per Dr. Ryan. Per the WHO, four other coronaviruses are endemic around the world, although none are as deadly as the COVID-19 variant.

Analyst Comment: Despite progress toward mass vaccination, COVID-19 may persist for many years to come. The virus could also mutate periodically, potentially rendering certain vaccines ineffective over time, forcing pharmaceutical firms to develop new vaccines for each year’s strains. Though the virus would likely circulate at much lower levels than the current global pandemic situation, COVID-19 could ultimately resemble the annual flu season in certain regards, with varying strains and vaccinations changing from year to year. Additionally, it is not yet clear whether COVID-19 will mutate to become more or less deadly, or more or less contagious.

However, some experts have speculated that endemic COVID-19 may not pose a significant public health threat in the future. Mass vaccination could create a state of herd immunity that would essentially eradicate COVID-19, with one medical expert pointing to the eradication of smallpox as a worthwhile goal. Research and speculation in this subject area are likely to continue, although the current pandemic situation must be resolved before questions about the virus’ potential endemic future become a pressing concern.

Sources: <https://www.cnn.com/2021/01/13/moderna-ceo-says-the-world-will-have-to-live-with-the-coronavirus-forever.html>

<https://www.cbsnews.com/news/coronavirus-may-never-go-away-world-health-organization-endemic-virus/>

<https://globalnews.ca/news/7549059/coronavirus-endemic-who-experts/>

On the Radar

- **Inauguration Day Threat Activity**

- President-elect Joe Biden's inauguration is scheduled for Wednesday 20 January. In the wake of the 06 January storming of the U.S. Capitol by a largely pro-President Trump mob motivated by claims of election fraud, security around the inauguration will be significantly heightened. Moreover, as of 14 January, FBI Director Christopher Wray warned of a significant amount of "concerning" online chatter relating to the inauguration, and some protest activities have been planned for the days leading up to the inauguration. Though the National Mall will be closed to the crowds that typically gather for presidential inaugurations and thousands of National Guard troops have been mobilized in preparation for potential unrest, it is likely that some malicious actors will attempt to conduct threat activities (to include civil disturbance or terrorist activities) in conjunction with the inauguration. This threat likely extends beyond Inauguration Day itself.

- **COVID Vaccine Rollout**

- The COVID-19 vaccine rollout continues, with approximately 22 million doses distributed and 6.7 million individuals having received the first shot. However, the distribution from state and local healthcare providers has created complications in "the last mile." States are left to triage citizens on their own. Most have targeted healthcare workers and nursing home residents, but some have experienced confusion, long lines, broken lines of communication, and overall difficulty administering the shots. President-elect Joe Biden's transition team has suggested his administration would work to release all available stock of the vaccine to speed up distribution.

- **U.S. Tornado Season**

- Tornado season begins in the spring in the US. The complications of a pandemic, seen across broad infrastructure as well as individual's health, is very likely to complicate disaster preparedness, response, and recovery in areas that may be hit.